Banking Analysis

The future of branches

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- **Branches are still relevant for acquiring deposits and delivering retail products and services**
- **The national network of branches is close to optimal, thus the marginal returns from adding new branches are small**
- **The decrease in the number of branches relative to real deposits and population since 2007 reflects less branch-intensive banking, which is likely to continue**

The demise of the branch has been prophesied for decades, yet it still remains a crucial access point for bank services, valued by most bank customers. However, the question about the future of retail branches looms large as mobile and online banking are becoming ubiquitous, most routine retail banking services that do not involve cash are becoming available remotely, and as customers are ever more comfortable with the new technologies for accessing them. This brief analyzes the recent trends in expansion and contraction of retail branch networks, the factors behind them, and the effects on deposits, mortgages and consumer loans. It also speculates on the impact that the new channels for retail banking service delivery will have on branches in the future.

Trends in bank branches

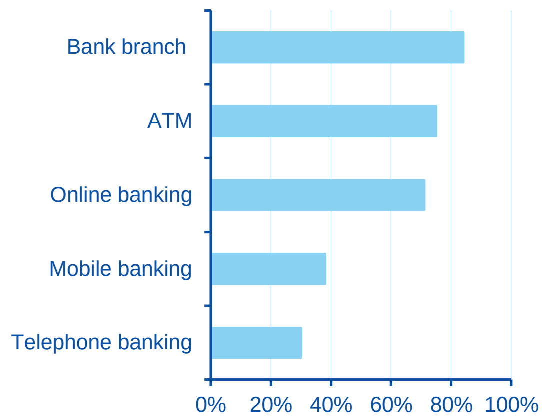
According to a recent survey conducted by the Federal Reserve,[1] over 80% of bank account owners have visited a branch in the preceding 12 months, despite the fact that online and mobile banking has secured a strong presence in the multichannel service delivery mix (Chart 1). The purpose of most of these in-branch visits has been to deposit a check or cash (77.7%) and/or to withdraw cash or cash a check (65.9%). The study does not show the likely decrease in the number of branch visits for the average retail banking client over time. However, a study conducted by FDIC analysts does arrive to the following conclusion: "*The rise of RDC (remote deposit capture), more sophisticated ATM terminals, and the proliferation of smartphones appear to be reducing the frequency with which bank customers are visiting their local branch to perform simple transactions. Moreover, the frequency of visits is lower for younger individuals.*"[2]

According to data from the FDIC, the number of commercial bank branches and offices (offices represent both branches and non-branch locations such as headquarters) has been stagnant since 2008, while real bank deposits (adjusted for inflation) per branch and per office reached record highs in 2015 (Chart 2). At the same time, the ratio of population per branch has been going up since 2007 (Chart 3). According to dates of branch openings and closures provided by SNL, branch closures have been surpassing branch openings since 2009 (Chart 4). Furthermore, while there was an increase in the number of branches prior to 2007, a contraction in the size of branches (measured by the number of employees per branch) was nevertheless happening at the same

[1] Federal Resrve System Board of Governors (2016). Consumers and Mobile Financial Services 2016. http://goo.gl/JMncri
[2] Bretienstein E. & McGee J. (2015). Brick-and-Mortar Banking Remains Prevalent in an Increasingly Virtual World. https://goo.gl/cH7mvB

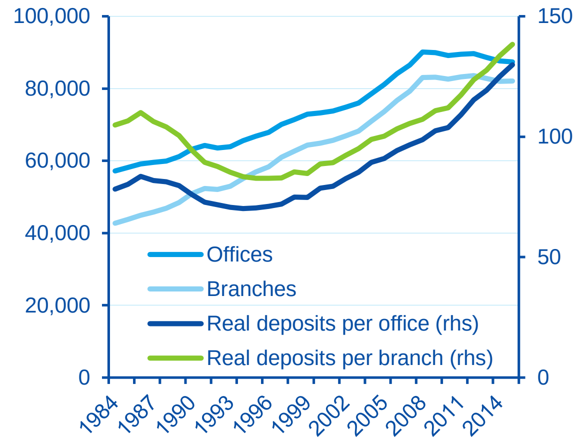
time. Employment size in bank branches declined from 22 employees per branch in 1988 to about 14 per branch in 2004, possibly a reflection of the changing nature of branch operations.[3]

Chart 1
Usage of different means of accessing banking services (% of bank account owners)



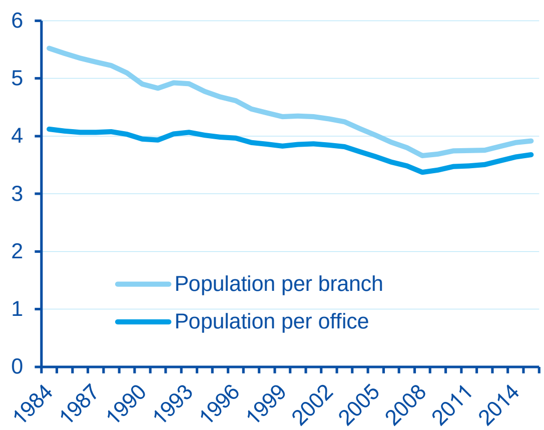
Source: FRB & BBVA Research

Chart 2
Commercial bank offices and branches and real deposits (Number and 2015 $ millions)



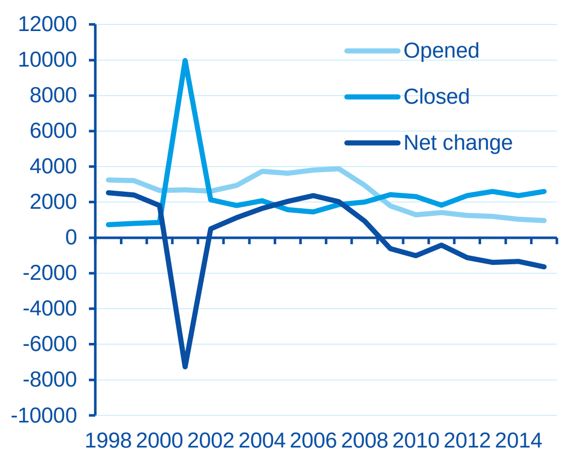
Source: FDIC & BBVA Research

Chart 3
Population per bank branch and office (Thousands of residents)



Source: Census, FDIC & BBVA Research

Chart 4
Branch openings and closures by year (Number)



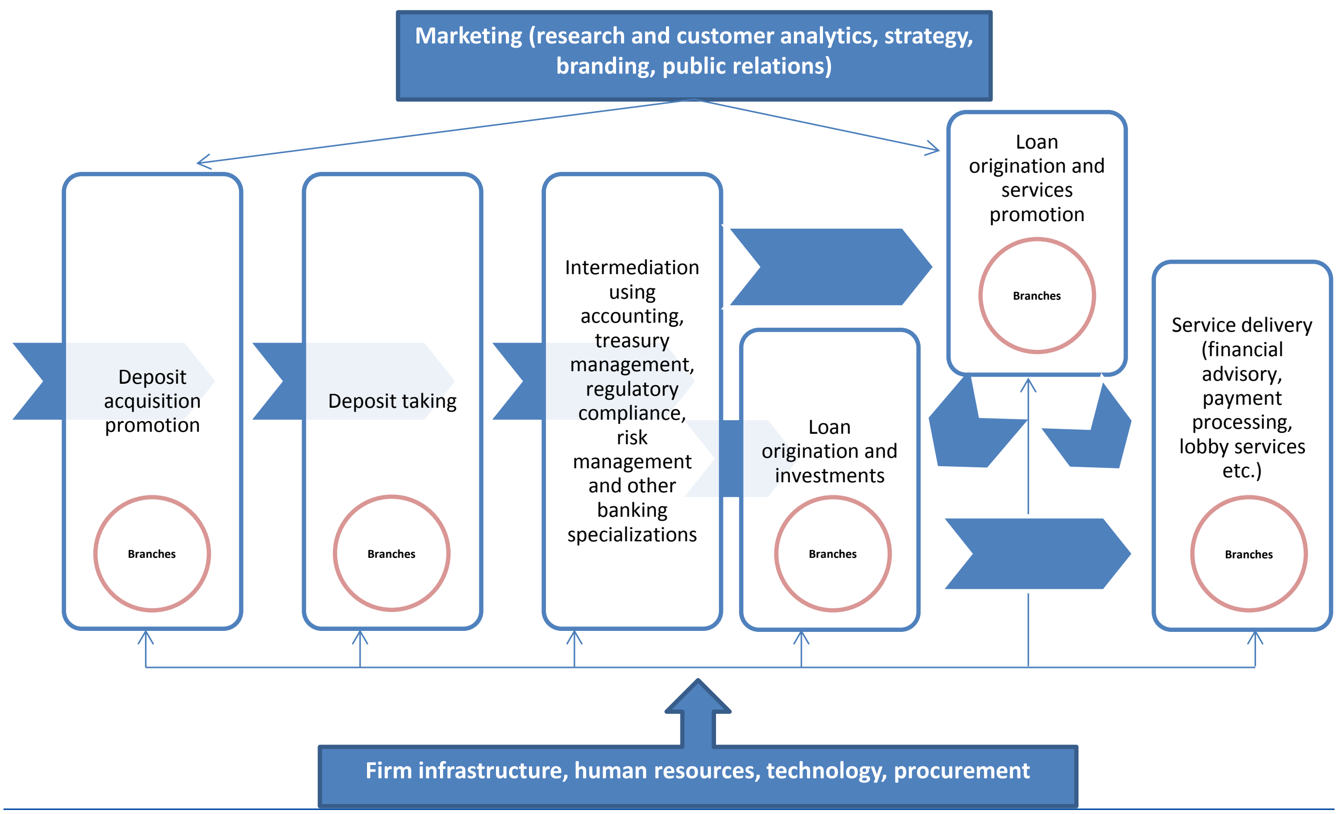
Source: SNL & BBVA Research

[3] Hannan T. & Hanweck G. (2008). Recent Trends in the Number and Size of Bank Branches: An Examination of Likely Determinants. Federal Reserve Board. https://goo.gl/LKFDdw

The role of branches in the banking value chain

Branches play a role across many parts of the banking value chain (Chart 5): they contribute to the brand awareness necessary for client acquisition both on the deposit side and on the lending and servicing side, facilitate the collection of deposits and perform some loan origination and service delivery. Multiple studies[4] have found that convenience, i.e. the distance to a branch, is a significant factor for explaining consumers' choices of financial service providers. For example, researchers have found that increasing the expected distance to a branch by merely 0.26% may lead to a 6% decrease in total deposits. Relatively recent data suggest that the median distance between households and their depository institutions is around 3 miles, 75% of consumers are within 10 miles, and the median distance between small firms and their financial service suppliers is around 5 miles. Keeping in mind that large shares of bank account owners still visit branches, the benefits arising from the proximity of branches to clients and large branch networks are still likely strong, despite the proliferation of online and mobile banking. That being said, the benefits of online and mobile banking, especially for customers located in remote areas, are undeniable, driving the diminishing relative importance of bank branches.

Chart 5
Commercial banking value chain



Source: BBVA Research

4 Grzelonska, P. (2005). Benefits from Branch Networks: Theory and Evidence from the Summary of Deposits Data (http://goo.gl/3a440x); Brevoort, K. & Wolken, J. (2008). Does Distance Matter in Banking? https://goo.gl/XgBy2E; Ho, K. & Ishii J. (2010). Location and Competition in Retail Banking. http://goo.gl/pJaQi4

Branches and deposit acquisition

An analysis of the relationship between the change in deposits and branches on a panel of 432 commercial banks from 1998-2015[5] (annual data obtained from SNL) confirms that the growth of real deposits by bank is statistically significantly positively correlated with the lagged growth in branches, lagged population growth, and change in real GDP, and inversely correlated with the change in the Herfindahl-Hirschman industry concentration index.[6] An additional inquiry in the possible change over time in the relationship between the growth in deposits and the lagged growth in branches suggests that the positive relationship has not weakened. This was done by comparing the relationship between the variables in the 1998-2006 and 2007-2015 periods (Table 1). However, while statistically significant, the change in the number of branches explains only a small part of the total variation in the level of deposits by bank (around 5%).[7]

The relationship between the change in deposits and branches by metropolitan statistical area (MSA) completes the picture. The results obtained from an analysis of a panel of the 30 largest MSAs during the 1998-2015 period show that while increasing real median family incomes and payrolls (payrolls reflect economic and employment growth) in the MSAs leads to higher deposits, the growth of branches does not. Unlike the causal relationship between deposits and branches by bank, which was bidirectional, the causality test in the MSA case indicates that the relationship is one-directional – the increase in the number of branches follows the increase in deposits.

These results support the hypothesis that the banking sector increases the number of branches when and where the population and economic factors are supportive of it, and the individual banks that do so are rewarded with support for future growth of their deposit base. That said, the effects of the growth of branches on deposits for banks, although statistically significant, are relatively limited, likely because the marginal returns from opening new branches are small due to the law of diminishing returns on investment in an environment where the overall network of branches is close to optimal.

Table 1
Real deposits and branches by bank – Relationships, significance and causality

	1998-2015		1998-2006		2007-2015	
	Statistical significance at s.l. 0.05	Relationship	Statistical significance at s.l. 0.05	Relationship	Statistical significance at s.l. 0.05	Relationship
L1 change in branches	Yes	Positive	Yes	Positive	Yes	Positive
L2 change in branches	Yes	Positive	Yes	Positive	Yes	Positive
Granger causailty	Bidirectional		L1 change in branches Granger causes change in deposits (at s.l 0.1)		Bidirectional	

Source: BBVA Research based on data from SNL

Table 2
Real deposits and branches by MSA – Relationships, significance and causality

	Statistical significance at s.l. 0.05	Relationship
L1 change in branches	No	Not relevant
L2 change in branches	No	Not relevant
L1 change in payrolls	Yes	Positive
L1 change in median family income	Yes	Positive
Granger causailty	Change in real deposits Granger causes change in branches (at s.l. 0.1)	

Source: BBVA Research based on data from SNL

[5] The analysis was done using panel regressions with random errors (Hausman test was performed to ensure appropriate choice of model). To avoid the effects of any M&A activity, coincident values of the variables, which would react contemporaneously to bank combinations, were not taken into consideration. The conclusions were confirmed using panel VAR models, while the causality was diagnosed using panel Granger tests for causality

[6] A commonly accepted measure of market concentration, calculated by squaring the market share of each firm competing in a market, and then summing the resulting numbers

[7] The change in deposits determined by lagged change in the number of branches could be understated because of the variability of deposits due to bank combinations, but is still likely not very high

Branches and retail loan origination

Another part of the banking value chain in which branches play a role is retail loan origination. Retail lending mostly takes the form of residential mortgages and consumer loans (revolving or nonrevolving). To test the impact of branches on the changes in retail loan portfolios by bank, three samples were constructed by randomly selecting banks from three groups – large, medium and small (all banks having deposits of over $1 billion). The results from the three panels (Table 3) are not supportive of the hypothesis that an increase in the number of branches leads to an increase in retail lending. Rather, the tests for causality indicate that, in most cases, it is growth in lending that leads to more branches. This implies that lending growth encourages the more aggressive and/or successful banks to open branches, although the return on investment is limited because of the saturation of the market with branches.

Table 3
Retail loan portfolio size and branches by bank - Relationships, significance and causality

	Large banks		Medium banks		Small banks	
	Statistical significance at s.l. 0.05	Relationship	Statistical significance at s.l. 0.05	Relationship	Statistical significance at s.l. 0.05	Relationship
Real residential loans						
L1 change in branches	No	Not relevant	No	Not relevant	Yes	Positive
L2 change in branches	No	Not relevant	Yes	Negative	No	Not relevant
Granger causailty	Change in real residential loans Granger causes change in branches (at s.l. 0.1)		Change in real residential loans Granger causes change in branches (at s.l. 0.1)		No Granger causality	
Real consumer loans						
L1 change in branches	No	Not relevant	Yes	Positive	No	Not relevant
L2 change in branches	Yes	Negative	No	Not relevant	No	Not relevant
Granger causailty	No Granger causality		Change in real consumer loans Granger causes change in branches (at s.l. 0.01)		Change in real consumer loans Granger causes change in branches (at s.l. 0.01)	

Source: BBVA Research based on data from SNL

Branches as one of many service delivery channels

For most of the history of banking, branches have served as the heart and soul of retail banking, as they were typically the only channel to render banking services. The main reason for this was the heavy use of paperwork because of the need for written contracts and receipts, checks and cash. Most of banking has now transcended that stage and adopted electronic accounting, recording and transacting. In addition, the Internet and mobile/smartphones have made remote access to banking feasible and more user-friendly than in the past due to expanded online service offering, speed and application intuitiveness. As larger numbers of clients have adopted this new technology, consumers have less of a need for branch services than before. While many consumers value the proximity of a branch and still use it for some services, the number of branch visits per customer is going down and will continue to do so, especially as the older generations of clients are replaced with younger and more tech-savvy ones, and as the user-friendliness of online and mobile banking keeps improving.

With the banking industry under pressure from persistently low interest rates and higher capital requirements that compress profit margins, banks will pay a lot of attention to the profitability of their branch networks and continue to leverage alternative service delivery channels. At the same time, they will continue experimenting with various ways to keep branches relevant and useful, like increasing the use of high-tech devices and self-service technology in branches, partnering with stores and employers, developing kiosks and paperless tellers, and offering financial education for clients.

Bottom line

The U.S. banking industry will continue shaping the branch network on the basis of economic and demographic trends, technology and customers' preferences. Therefore, bank branches are not going away any time soon as branches are still a crucial factor for customers when choosing banking service providers. Banks will continue opening new branches, particularly where there are opportunities for strong deposit growth. However, this trend will be limited given the law of diminishing returns, which entails low marginal returns in markets that are saturated with branches. Despite new branch openings, the overall declining trend in the number of branches relative to the volume of real deposits and population is likely to continue due to gains by the online and mobile service delivery channels, and changing customers' preferences that no longer favor branches or favor them less. As a result, banks will continue using new technologies and other tools at their disposal to boost branch profitability and value-added for their customers and to ensure that their branch networks are optimally sized and thus profitable, even if it means more branch closures. A successful transformation of the branch model will not only increase banking profitability but will also benefit customers and economic growth.